

Notice of Allowability

Application No.

09/344,299

Applicant(s)

SCHWARTZ ET AL.

Examiner

Art Unit

Brian T. Pendleton

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment on 5/5/05.
2. ☒ The allowed claim(s) is/are 3,8-17,24,25,28,29,37-39 and 41-47.
3. ☒ The drawings filed on 24 June 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Shawn O'Dowd on June 27, 2005.

The application has been amended as follows:

Please cancel claims 2, 4, 20, 21, 36, and 40.

Please amend claim 37 to read:

37. (Currently Amended) A method of processing signals comprising:

Providing a first signal and a second signal, each of said first and second signals comprising a frequency spectrum including a plurality of frequency bands;

Supplying said first and second signals to first and second signal processors, respectively;

Selecting at least one of said plurality of frequency bands with said first signal processor and selecting at least one of said plurality of frequency bands with said second signal processor, wherein said selections are less than the frequency spectrum of the plurality of frequency bands for said first and second signals;

Adjusting a level for the at least one frequency band selected by said first processor with said first processor, and adjusting a level for the at least one frequency band selected by said second processor with said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of

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said selected at least one frequency band in the other of said first and second signals, and said increase in level and said resultant decrease in level are performed independently of changes to other frequency bands in said first and second signal processors, wherein a magnitude of said increase in level is equal to a magnitude of said decrease in level, and

~~The method of claim 2 further comprising~~ combining said first and second signals after said adjusting step.

Please amend claim 41 to read:

41. (Currently Amended) ~~The apparatus of claim 20 further comprising~~ An apparatus for processing signals comprising:

a first input to receive a first signal from a first signal source and a second input to receive a second signal from a second signal source, each of said first and second signals comprising a frequency spectrum including a plurality of frequency bands;

first and second signal processors adapted to receive said first and second signals, respectively; said first signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than the frequency spectrum of the plurality of frequency bands for said first signal;

said second signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than the frequency spectrum of the plurality of frequency bands for said second signal;

the first signal processor further adapted to adjust a level for the at least one frequency band selected by said first processor, and said second signal processor further adapted to adjust a level for the at least one frequency band selected by said second processor, such that an increase

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in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals, and said increase in level and said resultant decrease in level are performed independently of changes to other frequency bands in said first and second signal processors, wherein a magnitude of said increase in level is equal to a magnitude of said decrease in level, and;

a mixer to combine said first and second signals from said first and second signal processors.

Please amend claim 47 to read:

47. (Currently Amended) ~~The apparatus of claim 20,~~ An apparatus for processing signals comprising:

a first input to receive a first signal from a first signal source and a second input to receive a second signal from a second signal source, each of said first and second signals comprising a frequency spectrum including a plurality of frequency bands;

first and second signal processors adapted to receive said first and second signals, respectively;

said first signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than the frequency spectrum of the plurality of frequency bands for said first signal;

said second signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than the frequency spectrum of the plurality of frequency bands for said second signal;

the first signal processor further adapted to adjust a level for the at least one frequency band selected by said first processor, and said second signal processor further adapted to adjust a level for the at least one frequency band selected by said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals, and said increase in level and said resultant decrease in level are performed independently of changes to other frequency bands in said first and second signal processors, wherein a magnitude of said increase in level is equal to a magnitude of said decrease in level, and;

wherein means are provided for separately adjusting the level of the first and second signals prior to providing said first and second signals to said signal processors.

The following is an examiner's statement of reasons for allowance: The closest prior art reference, Klayman, discloses providing a first and second signal to first and second processors, selecting at least one of a plurality of frequency bands with the processors, and adjusting a level in the frequency bands selected whereby an increase in the level of one of the signals results in a decrease in the level of the other signal. However Klayman does not disclose adjusting the level of the first and second signals prior to providing the first and second signals to the signal processors as required by claims 3 and 47. Newly discovered reference Kinoshita et al teaches a first and second signal, selecting at least one of a plurality of frequency bands with the processors and adjusting a level in the frequency bands selected whereby an increase in the level of one of the signals results in a decrease in the level of the other signal. Kinoshita also does not

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disclose nor suggest adjusting the level of the first and second signals prior to providing them to the signal processors. Newly discovered reference Iizuka et al disclose providing a first and second signal, selecting the frequency band through band pass filters 20 and 21 and adjusting a level of the signals through attenuators 26-28. However, Iizuka does not disclose adjusting the level of the signals prior to processing them (bandpass filtering them and adjusting their level). As a result, claim 3, its dependent claims 44-46 and independent claim 47 are allowed. Claim 8 requires providing a first signal from a first position relative to an instrument and a second signal from a second position relative to said instrument whereby the first and second signals are supplied to first and second signal processors, selecting at least one of a plurality of frequency bands with the processors, and adjusting a level in the frequency bands selected whereby an increase in the level of one of the signals results in a decrease in the level of the other signal. Neither Klayman, Kinoshita, nor Iizuka disclose providing the input audio signals from first and second positions relative to an instrument. Therefore claims 8-17, 38 and 39 are allowed. Apparatus claim 24 states that the first signal source and second signal source provide signals from first and second positions relative to an instrument. As expressed above, the prior art of record do not disclose that feature, therefore claims 24, 25, 28, 29, 42 and 43 are allowed. Independent claims 37 and 41 recite that a magnitude of increase in level in one signal is equal to a magnitude of decrease in level in the other signal and a mixer to combine the first and second signals. Klayman does not disclose an equal magnitude level increase and decrease of the first and second signals. While Kinoshita does disclose an equal magnitude level increase and decrease for the first and second signals, the reference does not disclose a mixer to combine the signals. As a result, claims 37 and 41 are allowed.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (571) 272-7527. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian T. Pendleton
Examiner
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